

OIL BAIT FISHERY OF CATFISHES IN BRAHMAPUTRA RIVER AFFECTING RIVER DOLPHIN POPULATIONS IN ASSAM, INDIA¹

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Threats to the Ganges river dolphin (*Platanista gangetica*) in River Brahmaputra were studied. Dolphin oil bait fishery (locally called as gharuwa fishing) was determined to be the major threat to this animal. 'Binn' – the migrant community from the neighbouring state Bihar, are the only trappers of river dolphins. Dolphin oil is used as a strong lure to catch catfishes in the Brahmaputra. It is mixed with an equal quantity of rape seed oil and applied on roasted sheep guts to prepare the bait. *Clupisoma garua*, *Eutropichthys vacha* are the catfish species caught by this type of fishing. A boat composed of 3 fishermen, 'Gharuwa' fishing unit, can fish up to 20-25 kg of fishes per night with 1-1.5 litres of oil. Dolphins were killed either with harpoons or under water gillnets. 20-25 litres of oil is obtainable from a moderately sized dolphin. Dhubri and Goalpara are the two main areas where this business is prevalent. A substitute for dolphin oil, a fish oil (waste product of fish based industries) from coastal India was tested with success as an alternative.

INTRODUCTION

A highly threatened aquatic mammal, the Ganges river dolphin (*Platanista gangetica*) has a discontinuous distribution, being found only in a few small pockets of the Indian subcontinent – in River Ganges, Brahmaputra, Meghna and Karnaphuli and their major tributaries. The river dolphin population is under multiple threats throughout its range of distribution due to large scale poaching and habitat loss. The population in Ganges is about to be wiped out mainly due to habitat degradation. During the last 5 years, the population in River Brahmaputra, once the safest place for river dolphins, has also declined drastically due to large scale poaching.

From a study on the status and threats to the river dolphins (Bairagi *et al.* 1993), it is known that the main causes of depletion are the loss of habitat and now, more importantly, commercial exploitation of the animal in the Brahmaputra river. Construction of dams and barrages along its major tributaries has isolated the population into some small pockets which

gradually disappear. The exact mortality rate is not known, as the river systems are vast and remote. Moreover, for this type of work, extensive monitoring of the river system involving huge fund allocation is required.

The commercial exploitation of river dolphins in the Brahmaputra and Ganges is mainly for the oil from its blubber, which accounts for about 30% of its total body weight. This fat is used for medicinal purposes (aphrodisiacs) and, more importantly, as an effective fish lure.

Some catfishes (*Clupisoma garua* and *Eutropichthys vacha*) are fished with the help of strong smelling dolphin oil bait, which attracts them. These fishes have a moderate market value, but large numbers of fishes can be caught by this method, therefore, large amounts of dolphin oil are used. A great demand for dolphin oil in these areas has resulted in indiscriminate killing of the dolphins. Serious measures will have to be taken immediately if the river dolphins of Brahmaputra are to be saved from extinction.

MATERIAL AND METHODS

This paper describes a study undertaken in 1993-94, in the Brahmaputra river system.

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Information about the dolphin oil bait fishery and killing of river dolphins was collected from the fishermen along the river bank. Killing methods at all concerned places were studied. Fishermen communities practising oil bait fishery were identified. Various methods applied for the extraction of oil were studied. Spot surveys were carried out along the river to locate the important places of fishing. Businessmen involved in the sale of dolphin oil were interviewed.

The procedure and effectiveness of dolphin oil as bait was studied by conducting surveys with a fishery worker for on-the-spot verification. A substitute for dolphin oil, crude fish oil, was introduced to test its suitability. A known quantity of fish oil was given to the fishermen. The fish catch data collected was later compared with the dolphin oil fish catch. Market feasibility was studied to commercialise the fish oil in the local markets of the areas.

Procedure of dolphin oil bait fishing:

This nocturnal fishing method varies from place to place. Three fishermen and a boat constitute a Gharuwa fishing unit. One of them is engaged solely in the preparation of the bait. Roasted sheep gut is chopped into small pieces and mixed with charcoal. This helps the material to float. Equal quantities of rape seed oil and dolphin oil are then mixed with the chopped gut. A small quantity of this bait is spread over the water. Within a few seconds, catfishes attracted by the strong smell accumulate near the boat, and are caught with "hook and line" using the same material in the hook as bait. In some places, dolphin oil is applied on big pieces of roasted duck meat.

RESULTS AND DISCUSSION

Reliable information on the killing of dolphins in Brahmaputra river was obtainable from fishermen not involved in this practice. There are two methods of killing river dolphins, harpoons or by gill nets. Surfacing dolphins are struck with a harpoon having a long rope tied to

retrieve it. The nets are generally made of strong monofilament nylon and placed in the migrating routes of the dolphins. As the material is very fine, the dolphins' echolocating mechanism cannot detect the net; they get trapped and die of suffocation.

At times, dolphins are accidentally caught in the gill nets meant to catch fish and die. These dolphins are sold to dolphin oil bait fishermen. This is an indirect mode of killing.

Binns, a local community that migrated from the neighbouring state of Bihar, are the main trappers of river dolphins and are exclusively involved in dolphin oil bait fishery. They are locally called Gharuwa fishermen and the method of fishing is called Gharuwa fishing. In the Brahmaputra, about 500 fishermen use this method of fishing throughout the river stretch. Some of them are involved exclusively in killing of dolphins and supply of dolphin oil.

To extract oil, the dolphin is first cut into small pieces and kept in tin containers (15 kg capacity). These containers are secretly buried under sand at the river bank in remote areas. After a few days, the oil separates out of the flesh. 7-8 litres of oil is obtained from a container of flesh and fat. Depending on the size of the animal, each dolphin requires 3 to 4 containers.

Throughout the length of River Brahmaputra in northeast India, there are 2 major and 3 minor sites where this business is prevalent. The major sites are Dhubri and Goalpara located on the lower stretch of the river. The Binn community resides here and conducts dolphin oil bait fishing throughout the Brahmaputra. The 3 minor sites are Chandrapur, Tezpur and Dibrugarh on the lower, middle and upper stretch of Brahmaputra respectively.

The businessmen involved in dolphin oil sale do it on the side, as this type of fishing is practised only in the lean seasons i.e., when water becomes clear and its level goes down. A container of dolphin flesh and fat costs about Rs. 300-400 from which 7 to 8 litres of oil (at Rs. 40-45 per litre) can be extracted.

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Depending on the availability of fishes, a boat can fish up to 20 kg per night. 1 to 1.5 litres of oil are required by a boat per night. From a moderate sized dolphin, only 20 to 25 litres of oil is extracted. In Dhubri and Goalpara, there are about 100 fishing boats engaged in Gharuwa fishing. Hence, the chance of indiscriminate killing of the animal in these areas is very high.

Fish oil was tested as a substitute, to save the river dolphins of Brahmaputra. This fish oil

was brought from the coast as a sample and introduced here. It was found that fish oil is as effective as dolphin oil, as the same quantity of fish can be caught using this oil. The fishermen are also happy with this new oil. If the required quantity of fish oil can be supplied at the same price as dolphin oil, the fishermen will stop killing the dolphins. This alternative must be considered for the conservation of the threatened river dolphins of the Brahmaputra.

REFERENCE

BAIRAGI, S.P., S.C. DEY & R.S. LAL MOHAN (1997): The status of a resident population of Ganges river dolphin

(*Platanista gangetica*) in Kulsri river of North East India. *Tiger Paper* Vol. 24, No. 2 Apr-June.

